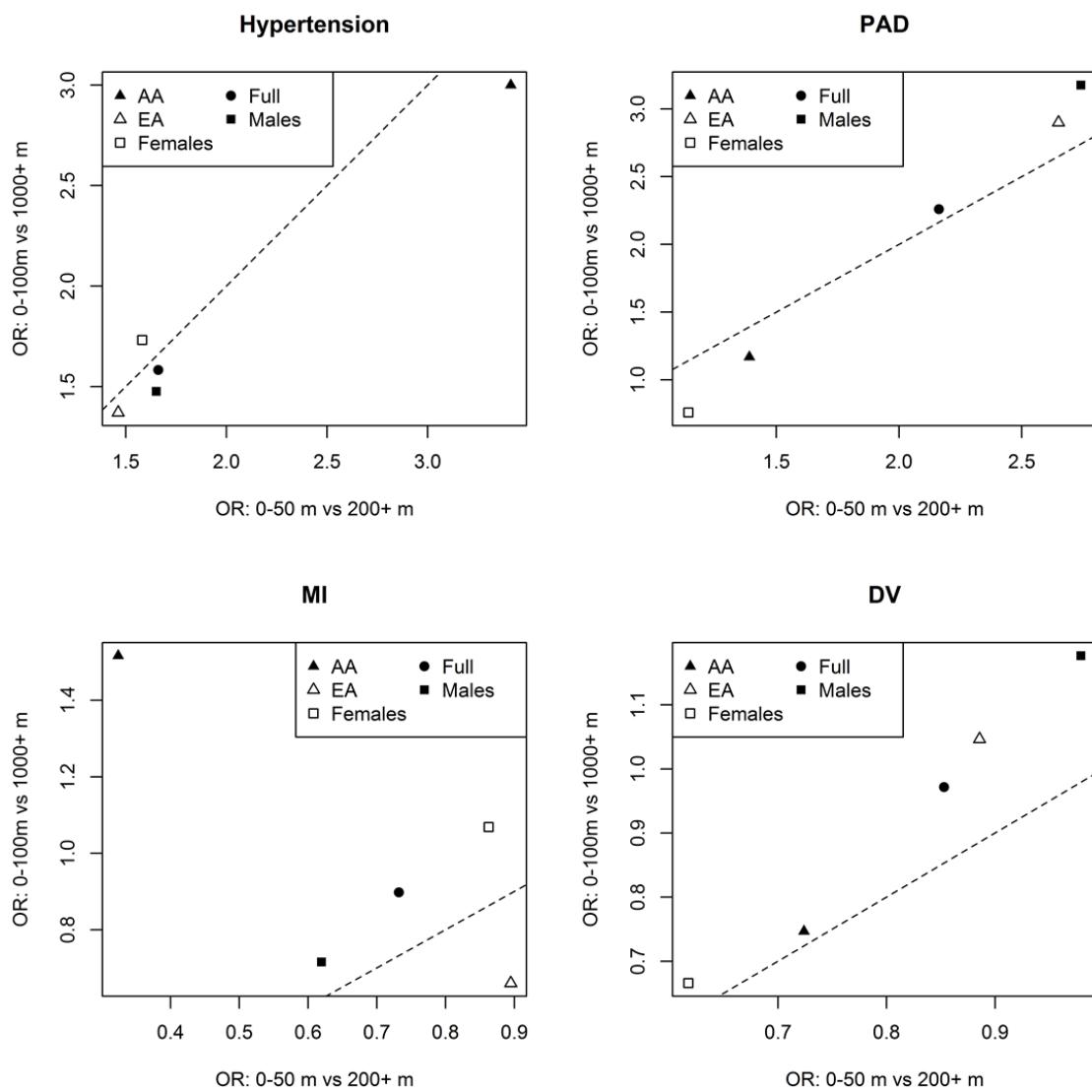


Supplemental Material

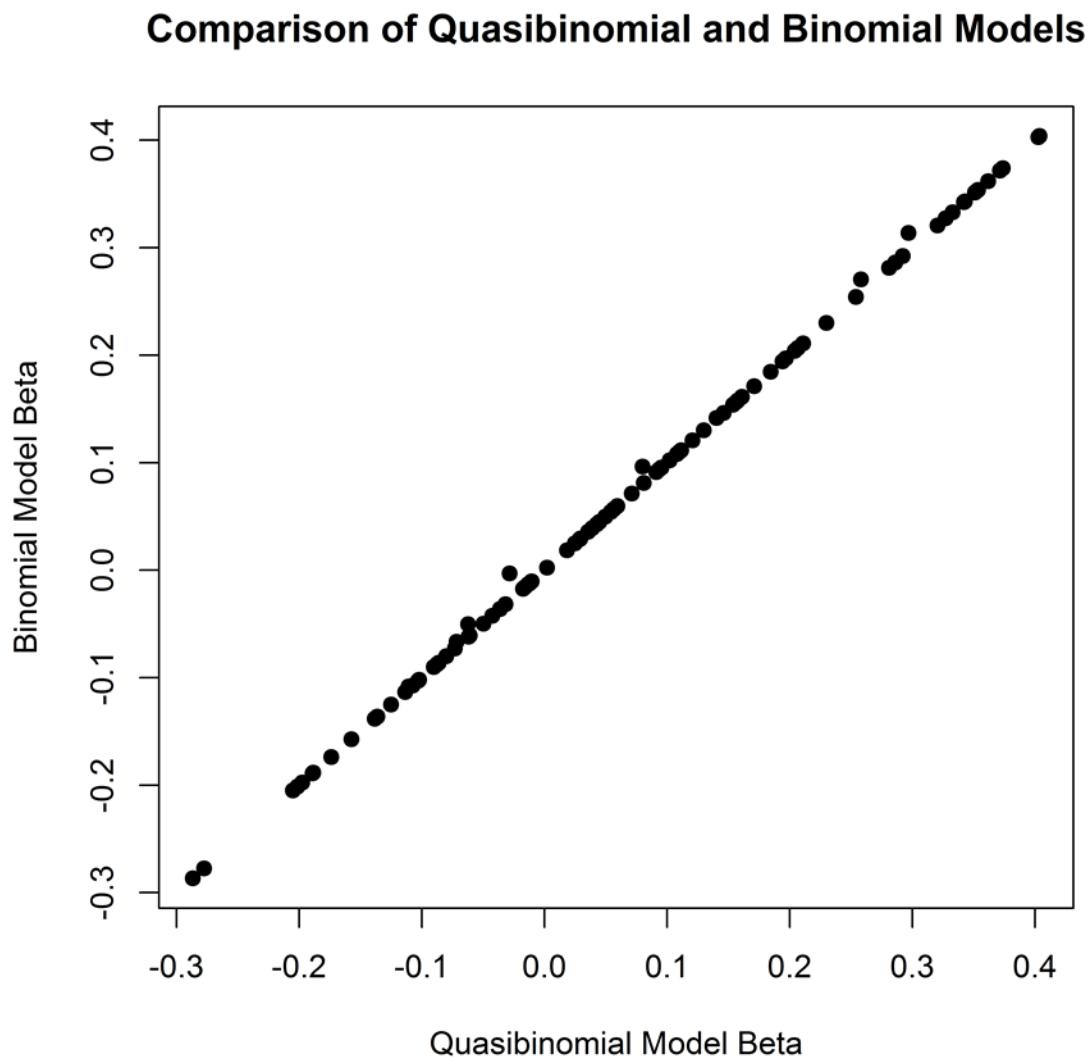
Supplemental Figure I. Association across stratifications for Categorical 1000m and Categorical 200m

Associations for each of the stratified models is given for the two categorical exposures. Models assessed were the complete cohort (Full), males only (Males), females only (Females), African-Americans only (AA), and European-Americans only (EA). The dashed line represents the $y=x$ line. Estimates for Categorical 1000m are given on the y-axis with Categorical 200m on the x-axis. As with in the manuscript the estimates (odds ratio) given are for the most extreme groups with respect to the distance to roadways for both categorical exposures. DV = diseased vessels, MI = myocardial infarction, OR = odds ratio, PAD = peripheral arterial disease



Supplemental Figure II. Comparison of estimates from Quasibinomial and Binomial models

Binomial and quasibinomial models show nearly identical estimates across all adjustments and stratifications considered. Each point in the graph below represents the estimate from both the binomial and quasibinomial models for a particular clinical variable adjustment (full or basic) and stratification of the cohort (no stratification, males only, females only, African-Americans only, or European-Americans only). All four outcomes are also represented. Beta = log(odds ratio)



Supplemental Table I. Basic and Full models for residential proximity to roadways associations

The basic model adjusted for sex and race. The full model adjusted for sex, race, body mass index, smoking, type 2 diabetes status, and median home value at the census tract level (2010 Census). DV = number of diseased vessels; LCI = 95% lower confidence interval; MI = myocardial infarction; PAD = peripheral arterial disease; OR = odds ratio; UCI = 95% upper confidence interval

a. Individuals residing within 2 miles of a major roadway

Outcome	Model	OR	LCI	UCI	P
Hypertension	Basic	1.17	1.05	1.31	0.01
Hypertension	Full	1.15	1.01	1.31	0.03
PAD	Basic	1.32	1.12	1.56	0.001
PAD	Full	1.29	1.08	1.55	0.004
MI	Basic	0.94	0.78	1.13	0.51
MI	Full	0.90	0.74	1.09	0.26
DV	Basic	0.96	0.88	1.06	0.45
DV	Full	0.94	0.85	1.04	0.21

b. All individuals

Outcome	Model	OR	LCI	UCI	P
Hypertension	Basic	1.17	1.05	1.31	0.004
Hypertension	Full	1.15	1.02	1.30	0.03
PAD	Basic	1.28	1.08	1.51	0.004
PAD	Full	1.24	1.04	1.48	0.02
MI	Basic	0.95	0.79	1.13	0.53
MI	Full	0.90	0.74	1.08	0.25
DV	Basic	0.99	0.90	1.08	0.78
DV	Full	0.96	0.87	1.05	0.38

Supplemental Table II. Race and sex stratifications and interactions for associations between clinical outcomes and residential proximity to roadways.

DV = number of diseased vessels; LCI = 95% lower confidence interval; MI = myocardial infarction; PAD = peripheral arterial disease; OR = odds ratio; UCI = 95% upper confidence interval

Outcome	Model	OR	LCI	UCI	P
Hypertension	Full	1.15	1.01	1.31	0.03
Hypertension	Males	1.12	0.96	1.31	0.16
Hypertension	Females	1.21	0.99	1.49	0.06
Hypertension	<i>Sex Interaction</i>	0.94	0.73	1.22	0.64
Hypertension	EA	1.10	0.96	1.26	0.17
Hypertension	AA	1.42	1.05	1.93	0.02
Hypertension	<i>Race Interaction</i>	0.76	0.54	1.06	0.10
PAD	Full	1.29	1.08	1.55	0.004
PAD	Males	1.42	1.17	1.74	0.001
PAD	Females	1.03	0.72	1.48	0.87
PAD	<i>Sex Interaction</i>	1.40	0.93	2.09	0.11
PAD	EA	1.41	1.14	1.74	0.001
PAD	AA	1.10	0.79	1.53	0.58
PAD	<i>Race Interaction</i>	1.29	0.87	1.91	0.21
MI	Full	0.90	0.74	1.09	0.26
MI	Males	0.82	0.63	1.06	0.14
MI	Females	0.98	0.73	1.32	0.92
MI	<i>Sex Interaction</i>	0.81	0.55	1.20	0.30
MI	EA	0.83	0.65	1.06	0.13
MI	AA	1.05	0.76	1.44	0.78
MI	<i>Race Interaction</i>	0.83	0.56	1.23	0.35
DV	Full	0.94	0.85	1.04	0.21
DV	Males	0.99	0.88	1.11	0.84
DV	Females	0.87	0.74	1.03	0.12
DV	<i>Sex Interaction</i>	1.13	0.92	1.38	0.24
DV	EA	0.99	0.88	1.10	0.83
DV	AA	0.84	0.69	1.02	0.08
DV	<i>Race Interaction</i>	1.17	0.94	1.46	0.17

Supplemental Table III. Basic and full models for associations between clinical outcomes and traffic exposure zones

All associations were estimated relative to the baseline zone (TEZ 1 – rural areas). DV = number of diseased vessels; LCI = 95% lower confidence interval; MI = myocardial infarction; PAD = peripheral arterial disease; OR = odds ratio; TEZ = traffic exposure zone; Trend = test of association treating traffic exposure zones as an ordinal variable with equal risk across successive zones; UCI = 95% upper confidence interval

Outcome	TEZ	Model	OR	LCI	UCI	P
Hypertension	TEZ 2	Basic	0.87	0.67	1.13	0.30
Hypertension	TEZ 3	Basic	0.84	0.61	1.16	0.28
Hypertension	TEZ 4	Basic	0.91	0.68	1.22	0.53
Hypertension	TEZ 5	Basic	2.09	0.95	4.61	0.07
Hypertension	Trend	Basic	1.01	0.93	1.10	0.79
Hypertension	TEZ 2	Full	0.88	0.66	1.18	0.40
Hypertension	TEZ 3	Full	0.79	0.55	1.14	0.21
Hypertension	TEZ 4	Full	0.88	0.63	1.23	0.46
Hypertension	TEZ 5	Full	3.13	1.17	8.32	0.02
Hypertension	Trend	Full	1.01	0.91	1.11	0.88
PAD	TEZ 2	Basic	0.88	0.54	1.44	0.62
PAD	TEZ 3	Basic	0.94	0.52	1.72	0.85
PAD	TEZ 4	Basic	1.14	0.68	1.91	0.61
PAD	TEZ 5	Basic	1.42	0.52	3.90	0.49
PAD	Trend	Basic	1.08	0.92	1.26	0.34
PAD	TEZ 2	Full	0.86	0.52	1.42	0.55
PAD	TEZ 3	Full	0.81	0.43	1.51	0.51
PAD	TEZ 4	Full	1.09	0.64	1.85	0.76
PAD	TEZ 5	Full	1.23	0.43	3.57	0.70
PAD	Trend	Full	1.05	0.90	1.23	0.54
MI	TEZ 2	Basic	1.66	1.02	2.71	0.04
MI	TEZ 3	Basic	1.49	0.83	2.67	0.18
MI	TEZ 4	Basic	1.46	0.86	2.47	0.16
MI	TEZ 5	Basic	0.92	0.27	3.21	0.90
MI	Trend	Basic	1.04	0.90	1.19	0.62
MI	TEZ 2	Full	1.68	1.03	2.75	0.04
MI	TEZ 3	Full	1.46	0.81	2.62	0.21
MI	TEZ 4	Full	1.28	0.75	2.20	0.37
MI	TEZ 5	Full	0.97	0.28	3.40	0.96
MI	Trend	Full	1.00	0.87	1.16	0.98
DV	TEZ 2	Basic	1.08	0.85	1.36	0.53
DV	TEZ 3	Basic	0.97	0.73	1.29	0.82

DV	TEZ 4	Basic	0.93	0.72	1.20	0.55
DV	TEZ 5	Basic	0.69	0.39	1.20	0.19
DV	Trend	Basic	0.95	0.88	1.02	0.16
DV	TEZ 2	Full	1.03	0.81	1.31	0.80
DV	TEZ 3	Full	0.82	0.61	1.10	0.19
DV	TEZ 4	Full	0.87	0.67	1.14	0.30
DV	TEZ 5	Full	0.62	0.34	1.13	0.12
DV	Trend	Full	0.93	0.86	1.00	0.06

Supplemental Table IV. Association between vascular outcomes using categorical measures of residential proximity to roadways

Two categorical models were used. Categorical 1000m (1000m) which binned individual into bins of 0-100 m, 100-200 m, 200-1000 m, and 1000+ m and Categorical 200m (200m) which binned individuals into bins of 0-50m, 50-100 m, 100-200 m, and 200+ m. For both, odds ratios are assessed relative to the furthest category, i.e. 1000+ m for Categorical 1 and 200+ m for Categorical 2. For the column “Stratification”, Full refers to no stratification, i.e. the complete cohort, while Males, Females, AA, and EA

AA = African-Americans; DV = number of diseased coronary vessels; EA = European-Americans; LCI = lower 95% confidence interval; OR = odds ratio; PAD = peripheral arterial disease; UCI = upper 95% confidence interval

Outcome	Categorical Model: exposure level	Stratification	OR	LCI	UCI	P
Hypertension	200m: 0-50	Full	1.66	1.00	2.75	0.048
Hypertension	200m: 50-100	Full	1.36	0.78	2.37	0.28
Hypertension	200m: 100-200	Full	1.42	0.95	2.11	0.09
Hypertension	200m: 0-50	Males	1.65	0.86	3.16	0.13
Hypertension	200m: 50-100	Males	1.47	0.69	3.10	0.32
Hypertension	200m: 100-200	Males	1.71	1.02	2.88	0.04
Hypertension	200m: 0-50	Females	1.58	0.71	3.54	0.27
Hypertension	200m: 50-100	Females	1.30	0.57	2.98	0.54
Hypertension	200m: 100-200	Females	1.13	0.61	2.09	0.71
Hypertension	200m: 0-50	EA	1.46	0.84	2.54	0.18
Hypertension	200m: 50-100	EA	1.34	0.71	2.56	0.37
Hypertension	200m: 100-200	EA	1.41	0.90	2.22	0.14
Hypertension	200m: 0-50	AA	3.41	0.78	14.97	0.10
Hypertension	200m: 50-100	AA	1.68	0.54	5.28	0.37
Hypertension	200m: 100-200	AA	1.49	0.64	3.49	0.35
PAD	200m: 0-50	Full	2.16	1.14	4.11	0.02
PAD	200m: 50-100	Full	2.04	0.96	4.32	0.06
PAD	200m: 100-200	Full	1.36	0.75	2.48	0.31
PAD	200m: 0-50	Males	2.74	1.33	5.66	0.01
PAD	200m: 50-100	Males	3.08	1.33	7.12	0.01
PAD	200m: 100-200	Males	1.48	0.70	3.12	0.31
PAD	200m: 0-50	Females	1.14	0.25	5.13	0.86
PAD	200m: 50-100	Females	0.46	0.06	3.64	0.46
PAD	200m: 100-200	Females	1.12	0.40	3.11	0.84
PAD	200m: 0-50	EA	2.65	1.25	5.60	0.01
PAD	200m: 50-100	EA	3.27	1.42	7.57	0.01
PAD	200m: 100-200	EA	1.24	0.57	2.71	0.58

PAD	200m: 0-50	AA	1.39	0.38	5.07	0.62
PAD	200m: 50-100	AA	0.42	0.05	3.32	0.41
PAD	200m: 100-200	AA	1.46	0.55	3.86	0.45
MI	200m: 0-50	Full	0.73	0.33	1.61	0.44
MI	200m: 50-100	Full	1.22	0.57	2.59	0.61
MI	200m: 100-200	Full	0.72	0.38	1.37	0.32
MI	200m: 0-50	Males	0.62	0.22	1.76	0.37
MI	200m: 50-100	Males	0.77	0.23	2.57	0.67
MI	200m: 100-200	Males	0.39	0.14	1.09	0.07
MI	200m: 0-50	Females	0.86	0.26	2.92	0.81
MI	200m: 50-100	Females	1.79	0.66	4.85	0.26
MI	200m: 100-200	Females	1.19	0.51	2.77	0.69
MI	200m: 0-50	EA	0.89	0.38	2.13	0.80
MI	200m: 50-100	EA	0.44	0.10	1.83	0.26
MI	200m: 100-200	EA	0.39	0.14	1.09	0.07
MI	200m: 0-50	AA	0.32	0.04	2.46	0.28
MI	200m: 50-100	AA	2.69	1.01	7.17	0.05
MI	200m: 100-200	AA	1.43	0.60	3.40	0.42
DV	200m: 0-50	Full	0.85	0.58	1.25	0.42
DV	200m: 50-100	Full	1.09	0.70	1.70	0.70
DV	200m: 100-200	Full	0.70	0.52	0.95	0.02
DV	200m: 0-50	Males	0.98	0.61	1.57	0.93
DV	200m: 50-100	Males	1.16	0.66	2.03	0.60
DV	200m: 100-200	Males	0.65	0.45	0.96	0.03
DV	200m: 0-50	Females	0.62	0.31	1.24	0.17
DV	200m: 50-100	Females	1.02	0.49	2.11	0.97
DV	200m: 100-200	Females	0.79	0.47	1.30	0.35
DV	200m: 0-50	EA	0.89	0.56	1.39	0.60
DV	200m: 50-100	EA	1.24	0.73	2.10	0.43
DV	200m: 100-200	EA	0.81	0.57	1.17	0.26
DV	200m: 0-50	AA	0.72	0.34	1.53	0.40
DV	200m: 50-100	AA	0.75	0.32	1.75	0.51
DV	200m: 100-200	AA	0.47	0.26	0.87	0.02
Hypertension	1000m: 0-100	Full	1.58	1.06	2.36	0.02
Hypertension	1000m: 100-200	Full	1.48	0.97	2.24	0.07
Hypertension	1000m: 200-1000	Full	1.07	0.86	1.34	0.53
Hypertension	1000m: 0-100	Males	1.48	0.87	2.50	0.15
Hypertension	1000m: 100-200	Males	1.61	0.93	2.78	0.09
Hypertension	1000m: 200-1000	Males	0.90	0.67	1.19	0.45
Hypertension	1000m: 0-100	Females	1.73	0.93	3.23	0.08
Hypertension	1000m: 100-200	Females	1.36	0.71	2.60	0.36

Hypertension	1000m: 200-1000	Females	1.38	0.97	1.97	0.07
Hypertension	1000m: 0-100	EA	1.37	0.87	2.15	0.17
Hypertension	1000m: 100-200	EA	1.37	0.85	2.20	0.19
Hypertension	1000m: 200-1000	EA	0.95	0.74	1.22	0.68
Hypertension	1000m: 0-100	AA	3.00	1.17	7.69	0.02
Hypertension	1000m: 100-200	AA	1.97	0.81	4.81	0.14
Hypertension	1000m: 200-1000	AA	1.60	0.99	2.58	0.05
PAD	1000m: 0-100	Full	2.26	1.28	3.99	0.005
PAD	1000m: 100-200	Full	1.46	0.76	2.80	0.26
PAD	1000m: 200-1000	Full	1.12	0.74	1.69	0.59
PAD	1000m: 0-100	Males	3.18	1.65	6.10	0.001
PAD	1000m: 100-200	Males	1.63	0.72	3.65	0.24
PAD	1000m: 200-1000	Males	1.18	0.71	1.95	0.52
PAD	1000m: 0-100	Females	0.76	0.20	2.83	0.68
PAD	1000m: 100-200	Females	1.10	0.36	3.35	0.87
PAD	1000m: 200-1000	Females	0.97	0.47	2.01	0.94
PAD	1000m: 0-100	EA	2.90	1.52	5.54	0.001
PAD	1000m: 100-200	EA	1.25	0.55	2.85	0.60
PAD	1000m: 200-1000	EA	1.00	0.61	1.63	1.00
PAD	1000m: 0-100	AA	1.17	0.34	4.02	0.80
PAD	1000m: 100-200	AA	1.92	0.62	5.94	0.25
PAD	1000m: 200-1000	AA	1.53	0.68	3.41	0.30
MI	1000m: 0-100	Full	0.90	0.50	1.63	0.72
MI	1000m: 100-200	Full	0.70	0.36	1.37	0.29
MI	1000m: 200-1000	Full	0.94	0.66	1.33	0.73
MI	1000m: 0-100	Males	0.72	0.31	1.67	0.44
MI	1000m: 100-200	Males	0.41	0.14	1.19	0.10
MI	1000m: 200-1000	Males	1.10	0.70	1.72	0.68
MI	1000m: 0-100	Females	1.07	0.46	2.50	0.88
MI	1000m: 100-200	Females	0.99	0.40	2.46	0.99
MI	1000m: 200-1000	Females	0.74	0.42	1.30	0.29
MI	1000m: 0-100	EA	0.66	0.30	1.45	0.30
MI	1000m: 100-200	EA	0.36	0.13	1.04	0.06
MI	1000m: 200-1000	EA	0.88	0.58	1.34	0.56
MI	1000m: 0-100	AA	1.52	0.58	3.97	0.40
MI	1000m: 100-200	AA	1.67	0.63	4.42	0.30
MI	1000m: 200-1000	AA	1.25	0.65	2.43	0.51
DV	1000m: 0-100	Full	0.97	0.71	1.33	0.86
DV	1000m: 100-200	Full	0.72	0.52	1.00	0.05
DV	1000m: 200-1000	Full	1.05	0.87	1.27	0.64
DV	1000m: 0-100	Males	1.18	0.79	1.74	0.42

DV	1000m: 100-200	Males	0.73	0.49	1.10	0.13
DV	1000m: 200-1000	Males	1.23	0.97	1.56	0.09
DV	1000m: 0-100	Females	0.67	0.39	1.15	0.15
DV	1000m: 100-200	Females	0.68	0.39	1.16	0.15
DV	1000m: 200-1000	Females	0.78	0.57	1.06	0.11
DV	1000m: 0-100	EA	1.05	0.72	1.52	0.81
DV	1000m: 100-200	EA	0.84	0.57	1.22	0.36
DV	1000m: 200-1000	EA	1.05	0.85	1.31	0.64
DV	1000m: 0-100	AA	0.75	0.40	1.39	0.36
DV	1000m: 100-200	AA	0.48	0.25	0.93	0.03
DV	1000m: 200-1000	AA	1.02	0.69	1.50	0.92